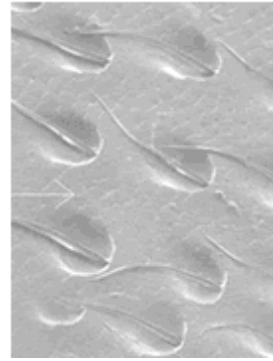


The Idea of Looking at Things Close Up, Part I

What is this?



- a) the surface of Mars
- b) cells swimming in a Petri dish
- c) ten fish eggs
- d) the underside of a beetle

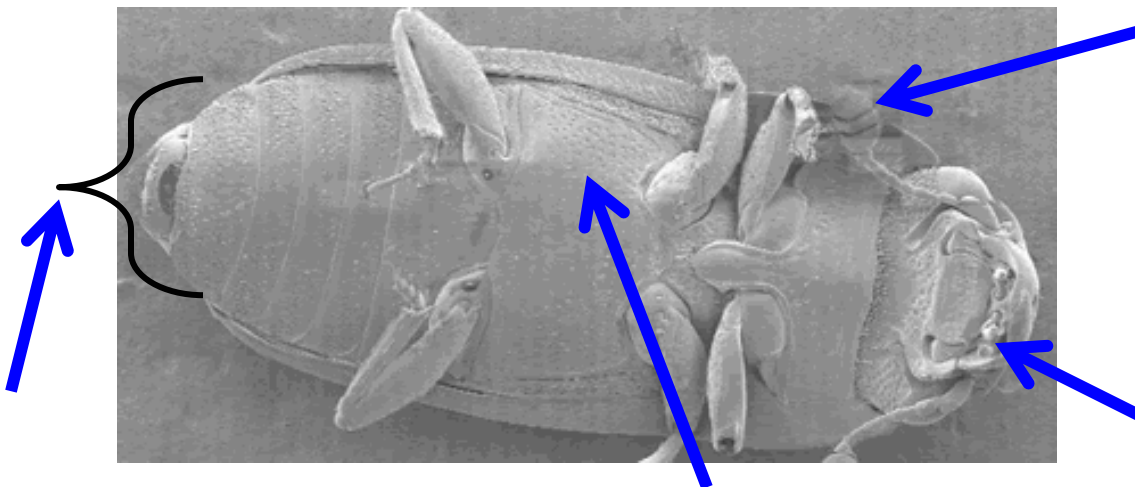


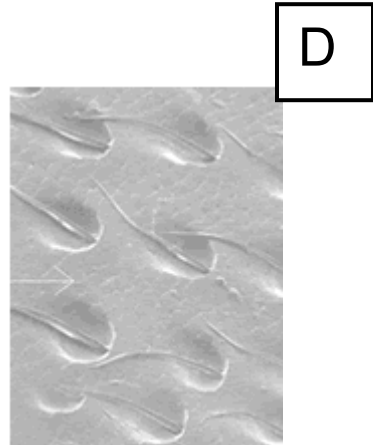
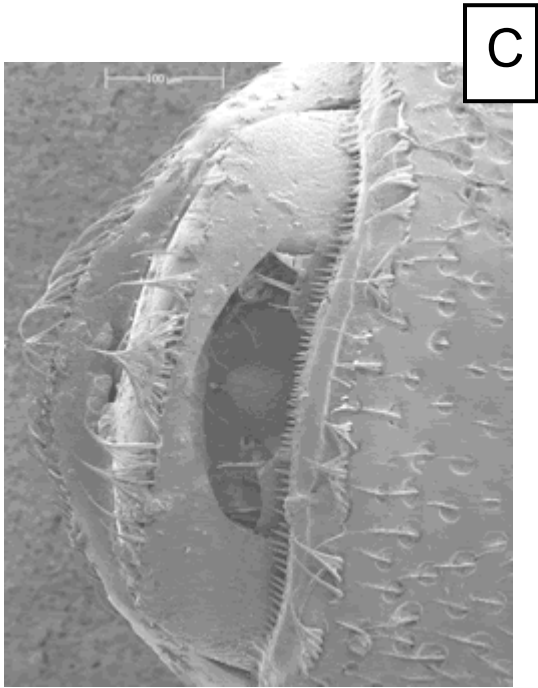
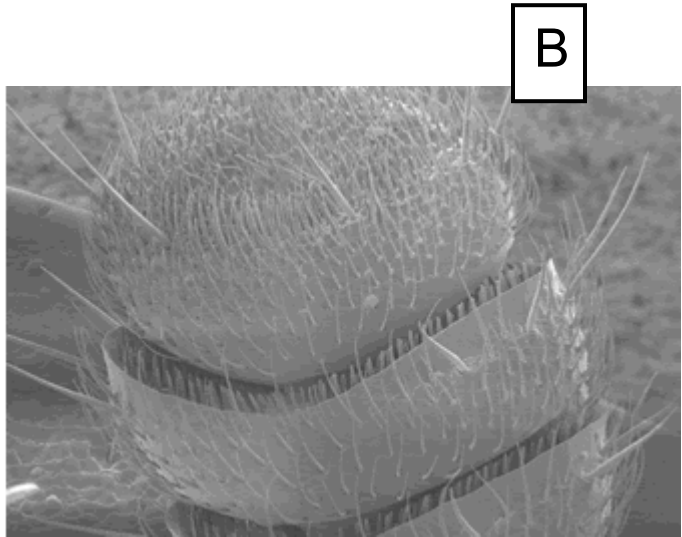
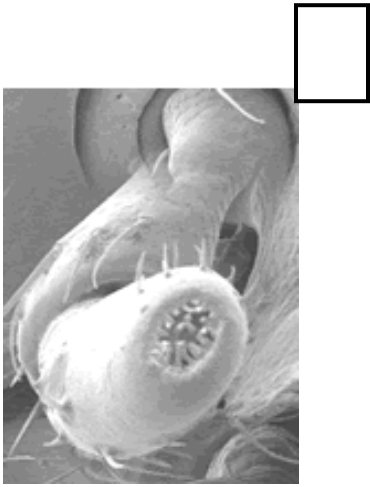
Scientists often see whole worlds in a grain of sand, they are able to see the smaller parts of things in ways that others might take for granted. If you came home from school one day and found this bug on the kitchen table, what would you do? Would you throw it in the trash can or outside? Would you bend close and try to get a closer look? What would it mean to see the smaller parts of a larger specimen?

Look again at the bug above. Earlier I asked what you see when you look at it on the table. You – as a person looking at it on the table. Remember when you were really little and you could look at the grass and wonder what it would be like to walk among the blades and over the soil, like an ant?

What if you were a microbe, instead of a person and you could actually crawl around on the palm of your own hand. Look at your palm and what might you see? How about if you could crawl on the beetle and see it up close....try to imagine this. Label the parts below on the beetle above. Don't worry if you can't locate all of them right now, but aim to label at least 75%. Remember, you are now a microbe, so what you see here is magnified x450 time or more that the actual size of the beetle as you would see it as a human.

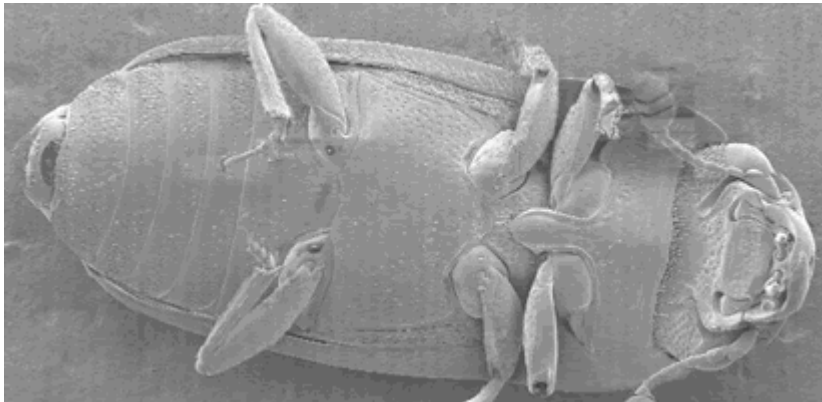
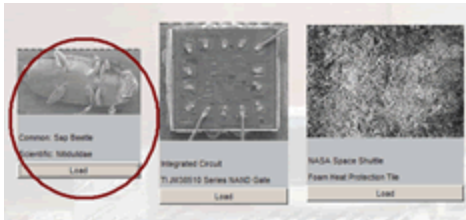
Look at this beetle and label it (A, B, C, D), identifying the magnified parts below.





The Idea of Looking at Things Close Up, Part II

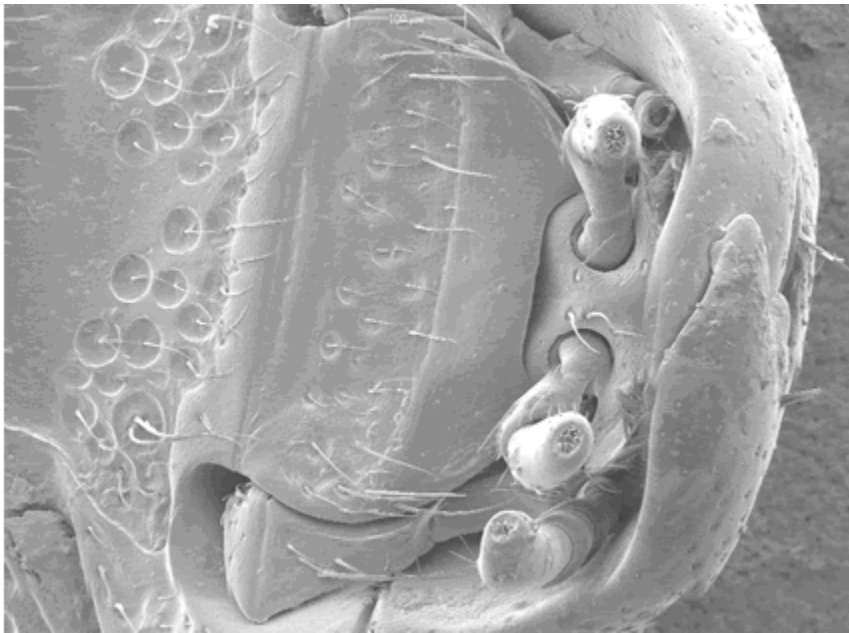
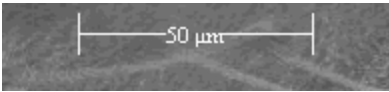
Here you can see the steps it takes to start the SEM simulation and the tools that will help you look at this beetle more closely.



A

B

C



X 450



X 900